

OILFIELD ENVIRONMENTAL AND COMPLIANCE, INC.

Client: SAMPLE ID: 09-2816-1

Date Sampled: 09/14/09 @ 1105 Date Analyzed: 09/14/09 @ 1546

Lab Contact: J. Carstens

Temp:

Facility: HP Boyne

Attn:

Description: HP Boyne Lease Seperator to Flare M-001

Note: Annual Gas Sample

Meter: -Pressure: 2

20 67

psig °F

Gas Analysis by Chromatography - ASTM D 1945/3588

Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen	
Nitrogen 0.32 0.40 Carbon Dioxide 16.16 31.37 Hydrogen Sulfide 0.00 0.00 Methane 78.59 55.61 Ethane 1.23 1.64 Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS Carbon Hydrogen Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ dry 937.1 Nitrogen	_
Carbon Dioxide 16.16 31.37 Hydrogen Sulfide 0.00 0.00 Methane 78.59 55.61 Ethane 1.23 1.64 Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2.2-Dimethylbutane 0.05 0.21 2.3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS Carbon Hydrogen Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	_
Hydrogen Sulfide 0.00 0.00 Methane 78.59 55.61 Ethane 1.23 1.64 Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.02 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ dry 953.7 Nitrogen	-
Ethane 1.23 1.64 Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2,3-Dimethylpentane 0.12 0.44 2-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.968 Gross Calorific Value BTU/ft³ dry 953.7 0xygen BTU/ft³ wet 937.1 Nitrogen	-
Propane 0.90 1.75 i-Butane 0.33 0.86 n-Butane 0.54 1.39 neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 Specific Gravity, Calculated 0.7827 air = 1 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	-
i-Butane	0.314
n-Butane	0.248
neo-Pentane 0.00 0.00 i-Pentane 0.24 0.77 n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.109
i-Pentane	0.171
n-Pentane 0.16 0.52 2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.000
2,2-Dimethylbutane 0.05 0.21 2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.088
2,3-Dimethylbutane 0.12 0.44 2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.059
2-Methylpentane 0.27 1.02 3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.020
3-Methylpentane 0.00 0.00 n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.042
n-Hexane 0.07 0.27 Hexanes Plus 0.98 3.74 Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.097
Hexanes Plus	0.000
Totals 100.0 100.0 Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.029
Specific Gravity, Calculated 0.7827 air = 1 Compressibility (Z) Factor 0.9968 CHONS W Carbon Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	0.413
Compressibility (Z) Factor 0.9968 CHONS W Carbon Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	1.590
Carbon	
Gross Calorific Value Hydrogen BTU/ft³ dry 953.7 Oxygen BTU/ft³ wet 937.1 Nitrogen	eight %
BTU/ft ³ dry 953.7 Oxygen BTU/ft ³ wet 937.1 Nitrogen	60.60
BTU/ft³ wet 937.1 Nitrogen	16.16
	22.84
Sulfur	0.40
	0.00
Net Calorific Value	
	8676.0
BTU/ft ³ wet 847.3 SDCF/MMBTU	
Hydrogen Sulfide = 16 ppm	
ND: None Detected NA: Not Analyzed G/MCF: Gallons/Thousand Cubic	Feet



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phone: (805) 922-4772 fax: (805) 925-3376

CHAIN OF CUSTODY

Page	1 01	<u> </u>

Company:					Project Name: Annual Gas Sample							
Street Address:				Site: HP Boyne Lease								
City:	State: Zip Code:			Comments:								
Telephone:			Fax:									
Report To:		X-	Samp	oler: Roger Dickinson						0_0_00		
Turnaround Time	☐ 10 Work Days ☐ Work Days ☐ 1 Work Day/Run ■ 5 Work Days/Report ☐ Work Days ☐ 2-8 Hours			Analyses Requested						T = =		
Lab Sample ID	Date/Time Sampled	Matrix	# of Cont.	Client Sample ID	C1>C6	BTU	H2S					Remarks
0903816 [A-B	09/14/09 @ //o S	Gas	2	HP Boyne Lease Seperator to Flare M-001	х	х	х		H		1	20 psig/67F
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3,									\forall			
								-	\Box			
Relinquished By	. Attitle	M	Date	2:09/14/09 Time:/ZOD Received By:	Sci	uli	- W			Date:09/	/14/09	Time: /200
Relinquished By	<u>r:</u>		Date	: Time: Received By:	%:					Date:		Time:
Relinquished By	<i>y</i> :		Date	: Time: Received By:						Date:		Time:
Sample integrity Samples receive Custody seals:	i			od of shipment: OEC ived intact: y / n								

DEC	SAMPLE RECE	IPT CLIENT:	SRR	_ (DEC ID#	. 090281	Temp:° C
COC RECEIV DATE/TIME:	ED9-14-09e1200	RECEIPT LOGI DATE/TIME:	9-14-09	e 124	0_	REF	RIGERATOR(s):
OEC Coun Delivery(Count Samples R Samples R Samples R After-Hou (Initials/Date/	Other than OEC Courier) Received on Ice Received Outside Temp. Range* Direct from field (Outside Temp) ars Outside Drop-off [Brought Inside] Time):	COC document(s) received Correct containers for ana Container(s) intact and in Container label(s) consists OEC preservative added Proper preservation on say VOA containers free of he Tedlar Bags free of conde	d with samples lysis requested good condition ent with COC (**note std ID) mple label(s) eadspace		No N// * *	Custody Seals Method of SI	Samples / Coolers Intact / Broken* nipment & Tracking #(if applicable):
	NGES AND/OR CORRECTION	·				ZED BY:	
OEC ID	Client ID	Container Description	Preservative	ResCl /pH	Matrix	Date/Time Sampled	Comments / Remarks / Condition Notes, Etc.
1-A-B	SeeCOC	1-Bomp			GAS	Seecoc	
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